Amendment to the Claims:

1. (Currently Amended) An in vivo method of increasing insulin production, comprising contacting a pancreatic islet cell with a polypeptide selected from the group consisting of SEQ ID NO: 2, 3, 4 and 5 ~~flavo-heme oxido-reductase polypeptide or an agonist thereof~~.

2-8 (Canceled)

9. (Original) A method of alleviating a symptom of diabetes in a subject, comprising administering to said subject a compound which increases the expression or activity of Ncb5or.

10. (Canceled)

11. (Currently Amended) The method of claim 9, wherein said compound is an inducer of Ncb5or expression.

12. (Original) The method of claim 9, wherein said compound is a Ncb5or polypeptide.

13. (Currently Amended)A method of increasing insulin production in a pancreatic cell, the method comprising contacting said cell with a composition which increases the expression or activity of Ncb5or.

14 -15. (Canceled)

16. (Original) A method of increasing serum insulin levels in a subject, the method comprising administering to said subject a compound which increases the expression or activity of Ncb5or.

17. (Canceled)

18. (Currently Amended)The method of claim 16, wherein said compound is an inducer of Ncb5or expression.

19. (Original) The method of claim 16, wherein said compound is a Ncb5or polypeptide.

20. (Original)The method of claim 16, wherein the subject is suffering from or at risk of developing diabetes.

21. (Original) A method of decreasing serum glucose levels in a subject, the method comprising administering to said subject a compound which increases the expression or activity of Ncb5or.

22. (Canceled)

23. (Currently Amended)The method of claim 21, wherein said compound is an inducer of Ncb5or expression.

24. (Original) The method of claim 21, wherein said compound is a Ncb5or polypeptide.

25. (Original) The method of claim 21, wherein the subject is suffering from or at risk of developing diabetes.

26 -30 (Canceled)

31. (Currently Amended)An in vivo method of inhibiting the loss of beta cells in pancreatic islet tissue, comprising contacting said pancreatic islet tissue with a polypeptide selected from the group consisting of SEQ ID NO: 2, 3, 4 and 5 ~~flavo-heme oxido-reductase polypeptide or an agonist thereof~~.

32. (Original) The method of claim 31, wherein said pancreatic islet tissue comprises at least 10% more beta cells in the presence of said flavo-heme oxido-reductase polypeptide compared to the amount in the absence of said flavo-heme oxido-reductase polypeptide.

33. (Original) The method of claim 31, wherein the amount of a reactive oxygen species in said pancreatic islet tissue is reduced in the presence of said flavo-heme oxido-reductase polypeptide compared to the amount in the absence of said flavo-heme oxido-reductase polypeptide.

34. (Original)The method of claim 33, herein said reactive oxygen species comprises superoxide (O_2^-) or ferri-heme.

35. (Original) The method of claim 31, further comprising contacting said pancreatic islet tissue with a anti-oxidant.

36. (Original) The method of claim 35, wherein said anti-oxidant is a niacin compound.

37. (Original) The method of claim 36, wherein said niacin compound is nicotimamide.

38-44 (Canceled)

45. (Currently Amended)A method of inhibiting cell death, comprising contacting a pancreatic cell with a composition comprising a polypeptide comprising the amino acid sequence of SEQ ID NO: 2, or a polypeptide consisting of the amino acid sequence of SEQ ID Nos 3, 4 and 5 ~~flavo-heme oxido-reductase polypeptide or an agonist thereof~~.

46.-49 (Canceled)

50. (Original) The method of claim 49, wherein said pancreatic cell is a β-cell.

51. (Canceled)

52. (Original) The method of claim 45, wherein said cell death is oxidative stress induced cell death.

53. (Original) The method of claim 45, wherein said cell death is apoptotic cell death.

54-59 Canceled